SENSE IT
TECHNOLOGIES
MONITORING AND CONTROL SOLUTIONS



LoRaWAN Temperature Sensor - Insertion Probe - 400mm

SKU: SI-LRW-TEMP-INS-400

The Sense It Wireless Insertion Temperature Sensor provides accurate internal temperature monitoring for grain, tobacco, hay, compost and other stored materials. Its 400 mm stainless-steel probe measures temperature deep within bulk material, while rugged construction, long battery life and wireless connectivity enable reliable remote monitoring with minimal maintenance.

OVERVIEW

The Sense It Wireless Insertion Temperature Sensor is designed to measure temperature inside bulk stored materials where conventional ambient temperature sensors cannot provide an accurate indication of internal conditions.

A 400 mm food-grade 316 stainless-steel probe is inserted directly into the material being monitored, allowing temperature to be measured below the surface. Typical applications include grain storage, tobacco warehouses, haystacks, compost piles and other warehousing or agricultural applications where internal temperature changes need to be detected.

The sensor provides a measurement range of -30 °C to +70 °C, typical accuracy of ±0.5 °C and 0.1 °C resolution. This allows gradual temperature trends as well as sudden changes to be identified before they develop into more significant storage or product-quality problems. An abrupt temperature change alarm is also supported.

Designed for demanding environments, the sensor has an IP67 ingress protection rating and an IK10 impact protection rating for the transmitter housing. Both the housing and stainless-steel probe are food-grade and resistant to phosphine corrosion, making the unit particularly suitable for grain and other stored-product environments where fumigation may be used.

A replaceable 4,000 mAh battery provides long-term operation, with battery life of up to 10 years under specified operating conditions. The sensor can also store up to 1,200 historical readings locally and supports retransmission and data retrieval, helping reduce the risk of gaps in monitoring data if wireless communication is temporarily interrupted.

When connected to the Sense It monitoring platform, temperature readings can be monitored remotely alongside other environmental and operational data. Historical trends and configurable alerts provide users with continuous visibility of stored materials without relying on regular manual temperature checks.

KEY FEATURES

- Accurate internal temperature measurement
- 400 mm insertion probe
- Food-grade 316 stainless-steel probe
- Measurement range from -30 °C to +70 °C
- Typical accuracy of ±0.5 °C
- Temperature resolution of 0.1 °C
- Suitable for grain and tobacco storage
- Suitable for hay and compost monitoring
- Abrupt temperature change detection

- Stores up to 1,200 historical readings
- Supports data retransmission
- Supports historical data retrieval
- IP67 ingress protection
- IK10 impact-resistant transmitter housing
- Phosphine corrosion-resistant construction
- Replaceable long-life battery
- Battery life up to 10 years
- Compact integrated wireless design
- Remote monitoring through the Sense It platform

TECHNICAL SPECIFICATIONS

Wireless

- Protocol: LoRaWAN
- Antenna: Internal antenna
- Frequency: CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
- Tx power: 16 dBm (868 MHz)/20 dBm (915 MHz)/19 dBm (470 MHz)
- Sensitivity: -137 dBm @300bps
- Mode: OTAA/ABP Class A

Performance

- Temperature measurement range: -30°C ~ +70°C
- Temperature accuracy: Typ. ± 0.5°C
- Temperature resolution: 0.1°C

Data

- Local data storage: 1200 entries
- Data retransmission supported
- Data retrieval supported
- Abrupt temperature change alarm supported

Power

- Power supply: 1 × 4000 mAh ER18505 Li-SOCl2 replaceable battery
- Battery life at 1 hour report interval and 25°C: Up to 10 years (SF7, EU868 & US915)
- Battery life at 1 hour report interval and 25°C: Around 4.8 years (SF10, EU868)
- Battery life at 1 hour report interval and 25°C: Around 5.5 years (SF10, US915)

Environmental

- Operating temperature: -30°C ~ +70°C
- Relative humidity: 0 ~ 95% (Non-condensing)
- Ingress protection: IP67
- Impact protection: IK10 (Transceiver)

Physical

- Transceiver material: ABS+PC (Food-Grade, Phosphine Corrosion resistant)
- Transceiver colour: White
- Sensor probe material: 316 Stainless Steel (Food-Grade, Phosphine Corrosion Resistant)
- Sensor probe colour: Silver Grey
- Transceiver dimensions: Φ 92 × 92 × 26 mm (Φ 3.62 × 3.62 × 1.02 in)
- Sensor probe dimensions: Φ 7 × 400 mm (Φ 0.28 × 15.75 in)

Installation

- Installation method: Insert installation

Configuration

- Power on and off: Mobile app via NFC or internal power button
- Configuration: NFC via mobile app

Approvals

- Regulatory: CE, FCC
- Environmental: RoHS

SENSE IT
TECHNOLOGIES
MONITORING AND CONTROL SOLUTIONS

info@senseit.co.za

+27 21 300 3026

Unit 11, First Floor
Bellfour Office Park
3 Edmar St
Bellville, 7550

Visit our website for more info
www.senseit.co.za



SMART MONITORING

Real-time visibility when it matters.

INSTANT ALERTS

Respond faster. Prevent downtime.

RELIABLE & SECURE

Built for reliability. Secured for peace of mind.

DATA THAT DELIVERS

Insights that help you make smarter decisions.